

09/622846

10 REISSUE PCT/EP/1 10 JUL 2001

SEQUENCE LISTING

<110> National University of Ireland, Cork

<120> HLA Linked Pre-Eclampsia and Miscarriage Susceptibility
Gene

<130> PL977PCT

<140> PCT/IE/99/00012

<141> 1999-02-25

<150> IE980134

<151> 1998-02-25

<150> IE980668

<151> 1998-08-12

<160> 23

<170> PatentIn Ver. 2.1

<210> 1

<211> 22

<212> DNA

<213> Homo sapiens

<300>

<400> 1

tactcccgag tctccgggtc tg

22

<210> 2

<211> 23

<212> DNA

<213> Homo sapiens

<400> 2

aggcgccccca ctgcccctgg tac

23

<210> 3

<211> 25

<212> DNA

<213> Homo sapiens

<400> 3

gaccgagggg gtggggccag gttct

25

<210> 4

<211> 460

<212> DNA

<213> Homo sapiens

<400> 4

tactcccgag tctccgggtc tgggatccac cccgaggccg cgggacccgc ccagaccctc 60

tacctggag aaccccaagg cgcccttacc aaaatcccg cgggtgggtc cgggcgaggg 120

cgaggtctgg tgggcgggca tgaccgaggg ggtggggcca ggttctaca ccctccagtg 180

gatgattggc tgccgacctgg ggtccgacgg acgcctccctc cgccggatcg aacagtatgc 240

ctacgatggc aaggattacc tcgcctgaa cgaggacctg cgctcctgaa ccgcagcgg 300

cactgcggct cagatctcca agcgcaagtg tgaggcggcc aatgtggctg aacaaaaggag 360

agcttacctg gagggcacgt gcgtggagtg gctccacaga tacctggaga acgggaagga 420

gatgctgcag cgccggggta ccagggcag tggggcgccct 460
 <210> 5
 <211> 460
 <212> DNA
 <213> Homo sapiens

 <400> 5
 tactcccgag tctccgggtc tgggatccac cccgaggccg cgggaccgc ccagaccctc 60
 tacctggag aaccccaagg cgccttacc aaaatccccg cgggtgggtc cgggcgaggg 120
 cgaggctcggtggccg tgaccgaggg ggtggggca gggtctcata ccctccagtg 180
 gatgattggc tgccacctgg ggtccgacgg acgcctcctc cgcgggtatg aacagtatgc 240
 ctacgatggc aaggattacc tcgcctgaa cgaggacctg cgctcctgga ccgcagcgg 300
 cactgoggct cagatctcca agcgcaagtg tgaggcggcc aatgtggctg aacaaaaggag 360
 agcctacctg gagggcacgt gcgtggagtg gctccacacaga tacctggaga acgggaagga 420
 gatgctgcag cgccgggtta ccagggcag tggggcgccct 460

 <210> 6
 <211> 319
 <212> DNA
 <213> Homo sapiens

 <400> 6
 gaccgagggg gtggggccag gtttcacac cctccagtg atgattggct ggcacctgg 60
 gtccgacgga cgccctcctcc gcgggtatga acagtatgcc tacgtatggca aggattacct 120
 cgccctgaac gaggacctgc gtcctggac cgacggac actgcggctc agatctccaa 180
 ggcgaagtgt gaggcggca atgtggctga acaaaggaga gcctacctgg agggcacgtg 240
 cgtggagtgg ctccacagat acctggagaa cggaaggag atgctgcagc ggcgggtac 300
 cagggcagtg gggcgccct 319

 <210> 7
 <211> 319
 <212> DNA
 <213> Homo sapiens

 <400> 7
 gaccgagggg gtggggccag gtttcatac cctccagtg atgattggct ggcacctgg 60
 gtccgacgga cgccctcctcc gcgggtatga acagtatgcc tacgtatggca aggattacct 120
 cgccctgaac gaggacctgc gtcctggac cgacggac actgcggctc agatctccaa 180
 ggcgaagtgt gaggcggca atgtggctga acaaaggaga gcctacctgg agggcacgtg 240
 cgtggagtgg ctccacagat acctggagaa cggaaggag atgctgcagc ggcgggtac 300
 cagggcagtg gggcgccct 319

 <210> 8
 <211> 32
 <212> DNA
 <213> Homo sapiens

 <400> 8
 gaccgagggg gtggggccag gtttcacac cc 32

 <210> 9
 <211> 27
 <212> DNA
 <213> Homo sapiens

 <400> 9
 gaccgagggg gtggggccag gtttcata

 <210> 10
 <211> 21

<212> DNA
<213> Homo sapiens

<400> 10
tgtgaaacag ctgccctgtg t

21

<210> 11
<211> 21
<212> DNA
<213> Homo sapiens

<400> 11
aaggaatgca gttcagcatg a

21

<210> 12
<211> 151
<212> DNA
<213> Homo sapiens

<400> 12
tgtgaaacag ctgccctgtg tggactgag tggcaagatt tgccatgcc ttccctttgt 60
gacttcaaga accctgactt ctcttgc agagaccgc ccaccctgt gcccaccatg 120
accctttcc tcatacgaa ctgcatttc t 151

<210> 13
<211> 137
<212> DNA
<213> Homo sapiens

<400> 13
tgtgaaacag ctgccctgtg tggactgag tggcaagtcc ctttgact tcaagaaccc 60
tgacttctct ttgtcagag accagccac ccctgtgcc accatgaccc tcttcctcat 120
gctgaactgc attcatt 137

<210> 14
<211> 26
<212> DNA
<213> Homo sapiens

<400> 14
caaaggaaag gcatgaacaa atcttg

26

<210> 15
<211> 25
<212> DNA
<213> Homo sapiens

<400> 15
gttcttgaag tcacaaagg acttg

25

<210> 16
<211> 2442
<212> DNA
<213> Homo sapiens

<400> 16
tactcccgag tctccgggtc tggatccac cccgaggccg cgggaccgc ccagaccctc 60
tacctggag aacccaagg cgccattacc aaaatccccg cgggtgggtc cgggcgaggg 120
cgaggctcg tggcggggc tgaccgaggg ggtggggcca ggttctcaca ccctccatg 180
gatgattggc tgcgacctgg ggtccgacgg acgcctcctc cgccggatgc aacagtatgc 240
ctacgatggc aaggattacc tcgcctgaa cgaggacctg cgctcctgga ccgcagcgga 300

cactgcggct cagatctcca agcgcaagtg tgaggcggcc aatgtggctg aacaaaggag 360
agcctacctg gagggcacgt gcgtggatg gtcacaga tacctggaga acgggaagg 420
gatgtgcag cgccgggtt ccagggcag tggggcgcct ccctgatctc ctgttagacct 480
ctcagctgg cctagcacaa ggagaggagg aaaatggac caacactaga atatgcgcct 540
ccctctggc ctgagggaga ggaatctcc tgggttcca gatctgtac cagagagtga 600
ttctgagggc cctgcctgt ctctggaca attaaggat gaagttctg agggagtg 660
ggggaaagaca atccctggaa gactgatcag gggccctt tgaccacaca gcagccttg 720
caccaggact ttcccctca ggcctgttc tctgcctcac actcaatgtg tgggggtc 780
tgactccagc tcctctgagt ccctggctt ccactcagg cagaaccgga ggtccctgt 840
ccccgcgtca gagactagaa ctttccaagg aataggagat tatccaggt gcccgtgtcc 900
aggctgtgt ctgggttctg tgctcccttc cccaccccaag gtatctgggtt cattcttagg 960
atggtcacat ccaggtgctg ctggagtg 1020
tgactctcc tttcagaccc cccaaagaca cacgtgaccc accaccctgt ctttgactat 1080
gaggccaccc tgaggtgctg ggcctggc ttctaccctg cggagatcat actgacactgg 1140
cagcgggatg gggaggacca gacccaggac gtggagctcg tggagaccag gcctgcagg 1200
gatggaaacct tccagaagtg ggcagctgtg gtgggtcctt ctggagagga gcagagatac 1260
acgtgccatg tgcagcatga gggctgccc gagccctca tgctgagatg gagaaggag 1320
ggagatggag gcatcatgtc tgtagggaa agcaggagcc tctctgaaga cctttaacag 1380
ggtcgttgtt gagggtctgg ggtcagagac ctcaccccttc acctcccttc ccagagcagt 1440
cttcctgccc caccatcccc atcatggta tcgttgcctg cctgggtgtc cttgcagctg 1500
tagtcaactgg agctgcggc gctgcgtgc tgtggagaaa gaagagctca ggtaaggaag 1560
gggtgacaag tgggtctga gtttctgtt cccactggg gttcaagcc ccaggttagaa 1620
gtgtccctg cctgggttact gggaaagcacc atccacactc atgggcctac ccagcctggg 1680
ccctgtgtc cagcacccctc tctttgtaa agcacctgtg acaatgaagg acagatttat 1740
tacctgtatg attgtatgtg tggggacctg atcccagtaa tcacaggtca ggagaagggtc 1800
cctggctaag gacagaccc aggaggccg ttggtcgagg acccacatct gctttcttg 1860
ttttcttctga tcgcctctgg tctgcgtca cacattctg gaaacttctc gagggtccaa 1920
gactaggagg ttccctctagg acctcatggc ctcaccccttc acctcccttc tcacaggaca 1980
ttttcttccc acagattgaa aaggaggag ctactctca gctgcaagta agtataagg 2040
aggctgatcc ctgagatctt tggatctt tttttgggg ccatggggg gtcacccac 2100
cccacaattt ctcctctggc cacatcttctg gtggctctg accaggtgt gttttgttc 2160
tactcttaggc agtgcacatg cccagggtctc taatgtgtct ctcacccctt gtaaatgtga 2220
caccggggg ggcctgtatgt gtgtgggtt tggagggaaa cagggacat agctgtgcta 2280
tgaggttct ttgacttcaa tggatggc atgtgatggg ctgtttaaag tggtaacccct 2340
caactgtgact gatatgaatt tgatcatgaa tattttctg tagtgtgaaa cagctgcgcct 2400
gtgtggact gagtggcaag atttggatgc cttccctt tg 2442

<210> 17

<211> 2442

<212> DNA

<213> Homo sapiens

<400> 17

tactcccgag tctccgggtc tggatccac cccgaggccg cgggacccgc ccagaccctc 60
tacctggag aaccccaagg cgccttacc aaaatccccg cgggtgggtc cgggcggagg 120
cgaggctcg tggcgggggc tgaccgagg ggtggggca ggttctata ccctccagtg 180
gatgattggc tgcgacactgg ggtccgacgg acgcctcctc cgccgtatg aacagtatgc 240
ctacgatggc aaggattacc tcgcctgaa cgaggacctg cgctctggc cccgacgg 300
caactgcggc cagatctcca agcgcaagtg tgaggcggcc aatgtggctg aacaaaggag 360
agcctacctg gagggcacgt gcgtggatg gtcacaga tacctggaga acgggaagg 420
gatgtgcag cgccgggtt ccagggccg tggggcgcct ccctgatctc ctgttagacct 480
ctcagctgg cctagcacaa ggagaggagg aaaatggac caacactaga atatgcgcct 540
ccctctggc ctgagggaga ggaatctcc tgggttcca gatctgtac cagagagtga 600
ttctgagggc cctgcctgt ctctggaca attaaggat gaagttctg agggagtg 660
ggggaaagaca atccctggaa gactgatcag gggccctt tgaccacaca gcagccttg 720
caccaggact ttcccctca ggcctgttc tctgcctcac actcaatgtg tgggggtc 780
tgactccagc tcctctgagt ccctggctt ccactcagg cagaaccgga ggtccctgt 840
ccccgcgtca gagactagaa ctttccaagg aataggagat tatccaggt gcccgtgtcc 900
aggctgtgt ctgggttctg tgctcccttc cccaccccaag gtatctgggtt cattcttagg 960
atggtcacat ccaggtgctg ctggagtg 1020
tgactctcc tttcagaccc cccaaagaca cacgtgaccc accaccctgt ctttgactat 1080

gaggccaccc tgaggtgctg ggccctggc ttctaccctg cggagatcat actgaccctgg 1140
cagcgggatg gggaggacca gacccaggac gtggagctcg tggagaccag gcctgcaggg 1200
gatggAACCT tccagaagtg ggcagctgtg gtgggcctt ctggagagga gcagagatac 1260
acgtgccatg tgcagcatga ggggctgccc gagcccccta tgctgagatg gagtaaggag 1320
ggagatggag gcatcatgtc tgtagggaa agcaggagcc tctctgaaga cctttaacag 1380
ggtcgggtggt gagggctggg ggtcagagac ctcacaccc acctccctt ccagagcagt 1440
cttccctgcc caccatcccc atcatggta tcgttgcgtg cctgggtgtc cttgcagctg 1500
tagtcaactgg agctgcggc gctgcgtgc tggagaaaa gaagagctca ggtaaggaa 1560
gggtgacaag tggggctgtg gtttctgt cccactggg gttcaagcc ccaggtagaa 1620
gtgtgccctg cttgggtact gggaaagcacc atccacaccc atgggcctac ccagcctggg 1680
ccctgtgtc cagcacccctc tctttgtaa agcacccgtg acaatgaagg acagatttat 1740
tacctgtatg attgtatgtg tggggacctg atcccaagtaa tcacaggtca ggagaaggc 1800
cctggctaaag gacagaccc aggaggccag ttggtcgagg accccacatct gcttccttg 1860
tttttctgta tcgcccggg tctgcgtca cacattctg gaaacttctc gagggtccaa 1920
gactaggagg ttcctctagg acctcatggc ctcgcaccc ttctgcctc tcacaggaca 1980
ttttctccc acagattgaa aaggagggag ctactctca gctgcaagta agtatgaagg 2040
aggctgatcc ctgagatctt tggatctt gtttggag ccatggggg gctcacccac 2100
cccacaattc ctcctctggc cacatctctt gtggctctg accaggtct gttttgttc 2160
tactctaggc agtgcacatg cccaggcgtc taatgtgtct tcacaggctt gtaaatgtga 2220
caccgggggg gcctgtatgt gtgtgggtt tggaggggaa cagggacat agctgtgcta 2280
tgaggtttct ttgacttcaa tgtattgagc atgtgatggg ctgtttaag tgtcacccct 2340
caactgtgact gatatgaatt tggatctgaa tattttctg tagtgaaa cagctgcct 2400
gtgtggact gatggcaag atttggat gccttcctt tg 2442

<210> 18
<211> 2441
<212> DNA
<213> Homo sapiens

<400> 18
tactcccgag tctccgggtc tggatccac cccgaggccc cgggaccctc ccagaccctc 60
tacctggag aacccaagg cgccttacc aaaatcccc cgggtgggtc cgggcgaggg 120
cgaggctcg tggcgggggc tgaccgggg ggtggggcca gtttcaca ccctccatgt 180
gatgattggc tgcacccgtt ggtccgcacgg acgcctccct cgcgggtatg aacagtatgc 240
ctacgatggc aaggattacc tcgcctgaa cgaggacctg cgctcctgaa cccgacggc 300
caactggct cagatctcca agcgcacatg tgaggccggc aatgtggctg aacaaaggag 360
agcctacctg gagggcacgt gcgtggatg gctccacaga tacctggaga acgggaagg 420
gatgtgcag cgcgcgggta ccaggggcag tggggcgctt ccctgatctc ctgttagaccc 480
ctcagcctgg cctagcacaa ggagaggagg aaaatgggac caacactaga atatgcct 540
ccctctggc ctgagggaga ggaatccctc tgggttcca gatcctgtac cagagatgt 600
ttctgagggc ccgtcctgtt ctctggaca attaagggtt gaagtcctg agggagtg 660
ggggaaagaca atccctggaa gactgatcg gggttccctt tgacccaca gcagccttg 720
caccaggact tttccctca ggcctgttc tctgcctcac actcaatgtg tgggggggtc 780
tgactccagc ttctctgagt cccttggctt ccactcaggc cagaacccggc ggtccctgt 840
ccccccgtca gagactagaa ctttccaagg aataggagat tatcccaagg gcccgtgtc 900
aggctgggtt ctgggttctg tgctccctt cccaccccaag gtatctgggtt cattcttagg 960
atggtcacat ccagggtctg ctggagtgtc ccatgagaga tgcaaagtgc ttgaatttc 1020
tgactctcc ttctcagaccc ccccaagaca cacgtgaccc accaccctgt ctttgcactat 1080
gaggccaccc tgaggtgctg ggcctggc ttctaccctg cggagatcat actgaccctgg 1140
cagcgggatg gggaggacca gacccaggac gtggagctcg tggagaccag gcctgcaggg 1200
gatggAACCT tccagaagtg ggcagctgtg gtgggcctt ctggagagga gcagagatac 1260
acgtgccatg tgcagcatga ggggctgccc gagcccccta tgctgagatg gagtaaggag 1320
ggagatggag gcatcatgtc tgtagggaa agcaggagcc tctctgaaga cctttaacag 1380
ggtcgggtggt gagggctggg ggtcagagac ctcacaccc acctccctt ccagagcagt 1440
cttccctgcc caccatcccc atcatggta tcgttgcgtg cctgggtgtc cttgcagctg 1500
tagtcaactgg agctgcggc gctgcgtgc tggagaaaa gaagagctca ggtaaggaa 1560
gggtgacaag tggggctgtg gtttctgt cccactggg gttcaagcc ccaggtagaa 1620
gtgtgccctg cttgggtact gggaaagcacc atccacaccc atgggcctac ccagcctggg 1680
ccctgtgtc cagcacccctc tctttgtaa agcacccgtg acaatgaagg acagatttat 1740
tacctgtatg attgtatgtg tggggacctg atcccaagtaa tcacaggtca ggagaaggc 1800
cctggctaaag gacagaccc aggaggccag ttggtcgagg accccacatct gcttccttg 1860

ttttcctga tgcgcctggg tctgcagtca cacattctg gaaacttctc gagggtccaa 1920
gactaggagg ttcccttagg acctcatggc cctgccacot ttctggcctc tcacaggaca 1980
ttttttccc acagattgaa aaggagggag ctactctcg gctgcaagta agtatgaagg 2040
aggctgatcc ctgagatcct tggatcttg tgtttggag ccatggggaa gtcacccac 2100
cccacaattc ctcctctggc cacatctctt gtggtctctg accaggtct gttttgttc 2160
tactctaggc agtgcacagtg cccaggcgtc taatgtgtct ctcacggctt gtaaatgtga 2220
caccggggg ggcctgtgt gtgtgggtt tgaggggaa cagggacat agctgtgcta 2280
tgaggtttct ttgacttcaa tgtattgagc atgtgatggg ctgtttaag tgtcacccct 2340
caactgtgact gatatgaatt tgccatgaa tattttctg tagtgtgaaa cagctgccc 2400
gtgtggact gagtggcaag tcccttggc acttcaagaa c 2441

<210> 19

<211> 2441

<212> DNA

<213> Homo sapiens

<400> 19

tactcccgag tctccgggtc tggatccac cccgaggccg cgggacccgc ccagaccctc 60
tacctggag aacccaagg cgccttacc aaaatccccg cgggtgggtc cgggcgaggg 120
cgaggctcg tggcgggggc tgaccgaggg ggtggggccaa ggttctcata ccctccatgt 180
gatgattggc tgcacactgg ggtccgacgg acgcctcctc cgccgtatg aacagtatgc 240
ctacgatggc aaggattacc tcgcctgaa cgaggacctg cgctctgaa ccgcagcgg 300
caactgcggc cagatctcca agcgcacgt tgaggcggcc aatgtggctg aacaaaggag 360
agcctacctg gagggcacgt gcgtggatg gctccacaga tacctggaga acgggaagga 420
gatgctgcag cgcgcgggtc ccagggcgg 480
ctcaggctgg cctagcacaa ggagaggagg aaaaatgggac caacactaga atatcgccct 540
ccctctggc ctgaggggaga ggaatccctcc tgggtttccaa gatcctgtac cagagagtga 600
ttctgagggc cctgcctgtc ctctggaca attaagggtat gaagtctctg agggagttgg 660
ggggaaagaca atccctggaa gactgatcgg ggggtccctt tgacccacaa gcagccttgg 720
caccaggact tttccctca ggcctgttc tctgcctcactca actcaatgtg tggtgggggtc 780
tgactccagc ttctctgagt cccttggcct ccaactcgatc cagaaccggaa ggtccctgct 840
cccccgctca gagactagaa ctttccaaagg aataggagat tatcccgatc gcccgtgtcc 900
aggctgtgt ctgggttctg tgctcccttc cccacccca gatatctggg tattcttagg 960
atggtcacat ccagggtctg ctggagtgtc ccatgagaga tgcaaatgtc ttgaattttc 1020
tgactttcc tttcagacccc ccccaagaca cacgtgaccc accaccctgt ctttactat 1080
gaggccaccc tgaggtgctg ggcctgggc ttctaccctg cggagatcat actgacctgg 1140
cagcgggatg gggaggacca gaccaggac gtggagctg tggagaccag gcctgcagg 1200
gatggacact tccagaagtg ggcagctgtg tggtgcctt ctggagagga gcagagatac 1260
acgtgccatg tgcagcatgaa gggctgccc gagccctca tgctgagatg gatgtggagg 1320
ggagatggag gcatcatgtc tgtagggaa agcaggagcc tctctgaaga cctttaacag 1380
ggtcgggtgt gagggtctgg ggtcagagac ctcacccctc acctcccttc ccagagcgt 1440
cttccctgac caccatcccc atcatggta tgctgtgtc cctgggtgtc cttgcagctg 1500
tagtcaactgg agctgcgggtc gtcgtgtgc tggtggagaaa gaagagctca ggttaagggaa 1560
gggtgacaag tgggtctga gttttctgtt cccactgggg gtttcaagcc ccaggtagaa 1620
gtgtgcctgtc cttgggtact gggaaacacc atccacactc atgggcctac ccagccttgg 1680
ccctgtgtc cagcacccctc tttttgtaa agcacctgtg acaatgaagg acagatttat 1740
taccttgatg attgtgtga tggggacctg atcccactaa tcacaggtaa ggagaagggtc 1800
cctggctaag gacagacccctt aggaggccag ttggtcgagg accccacatct gctttcccttg 1860
tttttctga tgcgcctggg tctgcagtca cacattctg gaaacttctc gagggtccaa 1920
gactaggagg ttcccttagg acctcatggc cctgccacot ttctggcctc tcacaggaca 1980
ttttttccc acagattgaa aaggagggag ctactctcg gctgcaagta agtatgaagg 2040
aggctgatcc ctgagatcct tggatcttg tgtttggag ccatggggaa gtcacccac 2100
cccacaattc ctcctctggc cacatctctt gtggtctctg accaggtct gttttgttc 2160
tactctaggc agtgcacagtg cccaggcgtc taatgtgtct ctcacggctt gtaaatgtga 2220
caccggggg ggcctgtgt gtgtgggtt tgaggggaa cagggacat agctgtgcta 2280
tgaggtttct ttgacttcaa tgtattgagc atgtgatggg ctgtttaag tgtcacccct 2340
caactgtgact gatatgaatt tgccatgaa tattttctg tagtgtgaaa cagctgccc 2400
gtgtggact gagtggcaag tcccttggc acttcaagaa c 2441

<210> 20

<211> 80

<212> DNA
<213> Homo sapiens

<400> 20
accctccagt ggatgattgg ctgcgacctg gggtccgacg gacgcctcct ccgcgggtat 60
gaacagttatg cctacgtatgg 80

<210> 21
<211> 14
<212> DNA
<213> Homo sapiens

<400> 21
atttgttcat gcct 14

<210> 22
<211> 70
<212> DNA
<213> Homo sapiens

<400> 22
gatatgaatt tggtcatgaa tattttctg tagtgtaaaa cagctgcct gtgtggact 60
gagtggcaag 70

<210> 23
<211> 80
<212> DNA
<213> Homo sapiens

<400> 23
tccctttgtg acttcaagaa ccctgacttc tctttctgca gagaccagcc cacccctgtg 60
cccaccatga ccctttcct 80